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| APPLICATION NO.                                                                                                    | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--------------------------------------------------------------------------------------------------------------------|-------------|----------------------|---------------------|------------------|
| 10/571,473                                                                                                         | 03/13/2006  | Shinsuke Nakamura    | Q93732              | 7790             |
| 23373 7590 01/09/2009<br>SUGHRUE MION, PLLC<br>2100 PENNSYLVANIA AVENUE, N.W.<br>SUITE 800<br>WASHINGTON, DC 20037 |             |                      |                     |                  |
| EXAMINER                                                                                                           |             |                      |                     |                  |
| FISCHER, JUSTIN R                                                                                                  |             |                      |                     |                  |
| ART UNIT                                                                                                           |             | PAPER NUMBER         |                     |                  |
| 1791                                                                                                               |             |                      |                     |                  |
| MAIL DATE                                                                                                          |             | DELIVERY MODE        |                     |                  |
| 01/09/2009                                                                                                         |             | PAPER                |                     |                  |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

## Application No.

10/571,473

## Applicant(s)

NAKAMURA, SHINSUKE

## Examiner

Justin R. Fischer

## Art Unit

1791

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 22 October 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3, 6, 7, 9, 10, 13 and 14 is/are rejected.
- 7) ☒ Claim(s) 4, 5, 8, 11, 12 and 15 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/808)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 3, 6, 7, 9, 10, 13, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Isobe (JP 9-58227, of record).

As best depicted in Figure 1, Isobe teaches a pneumatic tire construction including a polygonal bead core 3. Figure 1 further depicts an assembly in which the interference (radial distance between tire and phantom rim line 22) at the third base point is greater than the interference at the second base point. Based on the general disclosure of Isobe, one of ordinary skill in the art at the time of the invention would have found it obvious to form a tire such that the interference at the third base point is between 10 and 30% greater than the interference at the second base point as such a structure is generally depicted by the reference and applicant has not provided a conclusive showing of unexpected results to establish a criticality for the claimed relationship. It is further noted that while the figures are not described as "working drawings", they expressly depict an arrangement in which the interference at the third base point is larger than the interference at the second base point and the claimed relationship appears to be consistent with the general disclosure of Isobe.

In regards to the first tapered portion, Figure 1 depicts a structure in which the respective taper angles are approximately the same (rim line and tire line are substantially overlapped).

Also, with respect to the independent claim, the maximum displacement point is present at the axially innermost end of segment 4c. It appears from the figures that such a point is approximately positioned inward of the third base point by a distance approximately equal to 25% of the width of the bead core. It is further noted that the exact separation does not appear to be critical to Isobe and the reference generally depicts a structure in which the claimed quantitative relationship is approximately satisfied. Lastly, the dimensions and separation of tire components are commonly described in terms of a range of values and given the general disclosure/depiction of Isobe, one of ordinary skill in the art at the time of the invention would have found it obvious to form a tire satisfying the claimed quantitative relationship.

Lastly, regarding independent claim 1 and dependent claims 2-8, the bead base has a second tapered portion extending outwardly from the maximum displacement point (segment 4c) and a third tapered portion extending axially inward of segment 4c (segment directly beneath reference character 5). In this instance, (a) the second tapered portion appears to be at least 15 degrees, which is at least 10 degrees greater than a standard rim inclination (as defined by applicant in previous response) and (b) the third tapered portion appears to be 0 degrees, which is 5 degrees smaller than a standard rim inclination of 5 degrees (as defined by applicant in the previous response).

With respect to claims 3 and 10, the second tapered portion continues to the widthwise inside (axially inside) of the first tapered portion.

With respect to claims 6 and 13, Isobe clearly depicts a bead design in which the interference at the second base point is greater than the same at the first base point- such a general disclosure appears to be consistent with the broad range of the claimed invention and applicant has not provided a conclusive showing of unexpected results to establish a criticality for the claimed relationship.

Regarding claims 7 and 14, the claimed contact pressure relationship appears to be directly related to the claimed interference relationship. Given the similarities between the claimed interference relationship and that disclosed by Isobe, one of ordinary skill in the art at the time of the invention would have expected the bead of Isobe to demonstrate the claimed contact pressure relationship.

***Allowable Subject Matter***

3. Claims 4, 5, 8, 11, 12, and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

4. Applicant's arguments filed October 22, 2008 have been fully considered but they are not persuasive.

Applicant argues that Isobe does not teach or suggest specifically how small the taper angle should be as compared with the taper angle of a bead seat of a standard rim and does not teach the taper angles recited in claim 1. Applicant further contends

that there are two standard types of rims, one having a taper angle of 5 degrees and one having a taper angle of 15 degrees.

With respect to the second tapered portion (segment 4c), said second portion appears to be depicted with an inclination of approximately 15 degrees, which is approximately 10 degrees greater than the inclination associated with a standard rim (as disclosed by applicant). As to the third tapered portion, said third portion is depicted as having an inclination of 0 degrees, which is 5 degrees smaller than the inclination associated with a standard rim (as disclosed by applicant).

#### ***Conclusion***

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Justin R. Fischer** whose telephone number is **(571) 272-1215**. The examiner can normally be reached on M-F (7:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Justin Fischer  
/Justin R Fischer/  
Primary Examiner, Art Unit 1791  
January 6, 2009